SECTION 05 5200

METAL RAILINGS

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LANL MASTER SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the ESM Structural/Arch POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within “stars” during editing.

Specification developed for ML-3 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

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PART 1 GENERAL

1.1 SECTION INCLUDES

A. Steel pipe handrails, balusters and fittings.

1.2 DESIGN REQUIREMENTS

A. Design, fabricate and install railing assembly, wall rails and attachments to resist a lateral force of 200 pounds applied in any direction, at any point on the railing without causing damage or permanent set.

B. Comply with NFPA 101, Life Safety Code.

1.3 SUBMITTALS

A. Submit the following in accordance with Section 01 3300, Submittal Procedures:

1. Catalog data indicating prefabricated components such as mounting brackets, trim pieces, etc.

2. Shop drawings indicating profiles, sizes, connection attachments, anchorage, type and size of fasteners, and accessories.

PART 2 PRODUCTS

2.1 STEEL RAILING SYSTEM MATERIALS

A. Use pipe conforming to ASTM A500, Grade B, Schedule 40.

B. Make rails and posts of 1 1/2 inch outside diameter steel pipe with welded joints.

C. Use cast steel fittings, elbows, T shapes, wall brackets, escutcheons, etc.

D. Provide mountings for [casting in concrete, embedding in masonry or mounting to drywall partitions], as shown on Drawings.

E. Use flush, countersunk screws or bolts, consistent with design of railing system.

F. Use concealed splice connectors.

G. Apply SSPC 15, Type 1, red oxide shop primer.

2.2 FABRICATION

A. Fit and shop assemble components in largest practical sizes for delivery to site.

B. Fabricate components with joints tightly fitted and secured. Provide spigots and sleeves to accommodate site assembly and installation.

C. Provide anchors and fittings required for fastening assembly to structure. Fabricate anchors and related components of same material, with same finish, as post and railing fabrication.

D. Continuously seal exterior components by continuous welds. Drill condensate drainage holes at bottom of members in locations that will not allow water intrusion.

E. Join interior components with continuous welds; grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

F. Accurately form components to fit each other and to building structure.

PART 3 EXECUTION

3.1 INSPECTION

A. Verify that field conditions are acceptable and are ready to receive this Work.

3.2 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply items required to be [cast in concrete, embedded in masonry or built into partitions] with setting templates, to appropriate trades.

3.3 INSTALLATION

A. Install components plumb and level, accurately fitted, and free from distortion or defects.

B. Field weld anchors as indicated on shop drawings. Grind welds smooth, and touch up with primer.

C. Assemble railings with spigots and sleeves to provide tight joints and secure installation.

3.4 ERECTION TOLERANCES

A. Maximum variation from plumb is 1/4 inch per story, non-cumulative.

B. Maximum offset from true alignment is 1/4 inch.

C. Maximum out-of-position is 1/4 inch.

END SECTION

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Do not delete the following reference information:
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FOR LANL USE ONLY

This project specification is based on LANL Master Specification 05 5200 Rev. 0, dated January 6, 2006.